

Shared Decision Making and Rectal Cancer: Do the two go together?

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Developments in Cancer Management: Conquering
Cancer in our Lifetime

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Objectives

- Define shared decision making
- Discuss why it is important
- Discuss issues related to shared decision making and rectal cancer

Shared Decision Making

- Process of actively involving patients in treatment decision making
- Two way flow of information between the patient and physician
- Physician shares technical information
- Patient provides personal information
- Work together to arrive at mutually acceptable treatment decision

Shared Decision Making

1. Most patients prefer to be actively involved in treatment decision making
2. Patients have improved outcomes when they perceive a shared role in decision making
3. Physicians do not routinely facilitate share decision making
 - patient preferences for treatment
 - preferred role in the decision making process

What role do patients wish to play in treatment decision making? Deber et al, Arch Intern Med

- Survey 416 patients scheduled for angiogram
- Problem Solving-Decision Making Scale (PSDM)
- 3 vignettes
 - Morbidity (BPH)
 - Mortality (chest pain)
 - Quality of life (infertility)

What role do patients wish to play in treatment decision making?

- Response rate = 72%
- Mean age 59.6 years (24-82)
- Male 74.5%
- Completed high school 23.7%
- Completed university or college 11.0%
- Employed full time 34%

What role do patients wish to play in treatment decision making? Deber et al, Arch Intern Med

	Problem Solving Who gets the information? 1 = Doctor Alone 3 = Doctor and Patient Equally 5 = Patient Alone				Decision Making Who decides? 1 = Doctor Alone 3 = Doctor and Patient Equally 5 = Patient Alone	
Vignette	Diagnosis	Treatment Options	Risks and Benefits	Probabilities	Risks Acceptable	What is done
Mortality (Chest pain)	1.5	1.7	1.8	1.8	3.1	2.9
Morbidity (BPH)	1.8	1.8	2.0	1.8	3.2	3.0
Quality of life (Infertility)	1.7	1.9	2.0	1.8	3.2	3.2

Patient Role in Treatment Decision Making

- Patients want:
 - Information regarding treatment options and associated risks, benefits and outcomes
 - Asked their opinion and involved in treatment decisions
 - Female, younger, well educated want to play a more active role

Shared decisions in cancer care.

Gattellari M. Soc Sci Med, 2001

- Surveyed cancer patients attending outpatient clinics
 - *Preferred role* in the treatment decision making process before consultation
 - *Perceived role* or actual role achieved during the consultation
- Control Preferences Scale
 - 1 = doctor made decision
 - 2 = doctor made decision but strongly considered my opinion
 - 3 = doctor and I made the decision together
 - 4 = I made decision but strongly considered the doctor's opinion
 - 5 = I made the decision using all that I knew and learned
- Extent to which these roles matched and their effects on clinical outcome were assessed

Shared decisions in cancer care.

Gattellari M. Soc Sci Med, 2001

- 233 cancer patients
 - 45% prefer shared role
 - 32% achieved preferred role
- Preferred/Perceived roles matched or perceived a shared role (irregardless of preferred role)
 - Significant decrease in anxiety
 - Significant increase in satisfaction
 - Patients who *perceived* any degree of shared role were more satisfied than those who perceived did not
- Underscores importance of shared decision making

Informed decision making in outpatient practice. Braddock et al, JAMA 1997

- Cross sectional descriptive evaluation of 3552 encounters by:
 - 59 general internists and family practitioners
 - 65 general and orthopedic surgeons
- Characterize the nature and completeness of informed decision making in routine office visits
- Analysis of audio-taped patient-physician discussions

Informed decision making in outpatient practice. Braddock et al, JAMA 1997

Element	Basic (Lab test) (n=1857)	Intermediate Change dose or new medication) (n=1478)	Complex (Surgery) (n=217)	All (n=3552)
Patient role, %	5	5.2	18.4	5.9
Nature of decision, %	66.1	75.4	83.9	71
Alternatives, %	5.5	15.8	29.5	11.3
Pros and cons, %	2.3	12	26.3	7.8
Uncertainties, %	1.1	6	16.6	4.1
Patient understanding, %	0.9	1.5	6.9	1.5
Patient preferences, %	17.8	24.1	27.2	21

Treatment Decision Making for Rectal Cancer

- Treatment decision making for rectal cancer is challenging
- Inherent trade off between oncologic outcome (survival, local recurrence) and functional outcome (bowel, sexual, bladder)
- Well suited to shared decision making
- But also problematic

Patient preferences for adjuvant chemoradiation for rectal cancer

- Multidisciplinary treatment decision
- RCT data to support (Dutch/German):
 - Decrease in local recurrence
 - No change in survival
 - Less toxic less toxic than post-operative

Functional Results - The Dutch Trial

Peeters, JCO 2005

The Dutch TME Trial		
	TME alone	Preop rads + TME
Incontinence - day	5%	14%
Use of pads	33%	56%
Impacts daily activities	22%	34%
Satisfied with bowel function	60%	50%

Patient preferences for adjuvant chemo-radiation for rectal cancer

- Are patients willing to trade off effectiveness (local recurrence) for modest improvements in function?

Patients' preferences for post-operative chemoradiation therapy

Couture et al. Dis Colon Rectum, 2006

- Cross sectional survey
- Colorectal cancer patients
- Attending follow up clinic
- Threshold technique
- Absolute risk of local recurrence that patients would demand before they would accept post-op chemorads

Patients' preferences for post-operative chemoradiation therapy

Couture et al. Dis Colon Rectum, 2006

- Threshold technique
- Involves a pairwise comparison of treatment options
 - treatment protocol, risks, benefits and outcomes
- Outcome of interest represented on a sliding scale

Threshold Technique

Surgery relative to Surgery + post-op chemorads

TREATMENT PLAN "W"
(Surgery)

TREATMENT PLAN "L"
(Surgery + post-op chemorads)

SLIDING SCALE

10% risk of local recurrence at 2 years

SLIDING SCALE

10% risk of local recurrence at 2 years

- Initially, risk of local recurrence set at 10% for both options
- Realistic risk of local recurrence for Surgery Alone
- Hypothetical risk of local recurrence for Surgery + post-op chemorads
- Expected that majority of patients initially prefer Surgery alone

Threshold technique

Surgery + post-op chemorads relative to surgery

- Risk of local recurrence for surgery + post-op chemorads decreased until the participant accepts surgery + post-op chemorads over surgery alone

TREATMENT PLAN "W"
(Surgery alone)

TREATMENT PLAN "L"
(Surgery + post-op chemorads)

SLIDING SCALE

10% risk of local recurrence at 2 years

SLIDING SCALE

5% risk of local recurrence at 2 years

- Participant would demand a local risk of recurrence to be 5% or less before they would accept post-op chemorads

Patient's preferences for adjuvant post-operative chemorads

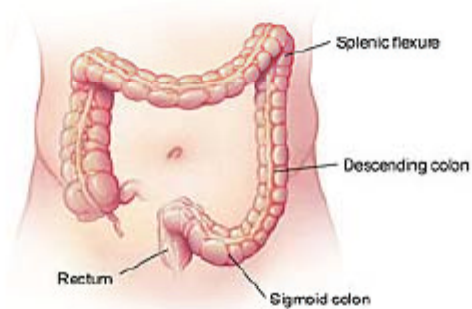
		Local risk of recurrence required to accept post-op chemorads										
		10	9	8	7	6	5	4	3	2	1	0
N			3	5	1	7	9	2	1	7	1	11
%			6	11	2	15	19	4	2	15	2	23

- 23% unwilling to accept chemorads even if risk of local recurrence was 0%
- 17% willing to undergo chemorads even if the risk of local recurrence were as high as 8% or 9%
- Overall 65% would not accept post-op chemorads until risk of local recurrence was 5% or less

Patients' preferences for pre-operative chemoradiation

- Cross sectional survey
- Healthy individuals at "average risk" for colorectal cancer
- Attending colonoscopy screening clinics
- Threshold technique
- Absolute risk of local recurrence that patients would demand before they would accept pre-op chemorads

YOU HAVE JUST BEEN DIAGNOSED WITH RECTAL CANCER



TODAY

- Consultation with surgeon
- Goals of treatment

CURE CANCER AND PREVENT LOCAL RECURRENCE

- Two available treatment options:

SURGERY ALONE

- SURGERY ONLY

CHEMORADIATION & SURGERY

- CHEMORADIATION before surgery
- SURGERY
- CHEMOTHERAPY after surgery

Chance of cure is the SAME for both treatments

LOW RISK of local recurrence

May further DECREASE the risk of a local recurrence

- Interested in your opinion about these treatment options

BEFORE SURGERY

SURGERY ALONE

- No chemotherapy or radiation
- Surgery within the next 3-6 weeks

SIDE EFFECTS

- None

CHEMORADIATION & SURGERY

- Chemoradiation for 5 weeks
- Rest and recovery for 6 weeks followed by surgery
- Plan to be off work

INVOLVES

- 25 radiation treatments (5 days/week for 5 weeks)
- Chemotherapy given continuously through a special IV (24 hrs/day, 7 days/week for 5 weeks)
- Come to the hospital every day for 1 hour for radiation treatment and once a week for chemotherapy treatment

SIDE EFFECTS

20% - 40% chance of:

- Sore gums and sores in the mouth
- Rash on hands and/or feet
- Fatigue
- Nausea
- Diarrhea

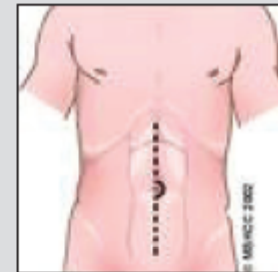
10% chance of:

- Low blood counts that may increase the risk of infection
- May require short hospitalization if side effects develop

SURGERY

Surgery is the same for both treatments

- Up and down incision
- Rectum and surrounding lymph nodes are removed
- Lymph nodes are glands through which cancer can spread to the rest of the body
- Two ends of bowel joined back together
- Have bowel movements the same as before surgery
- 6-12 weeks before you will be able to resume daily activities



BENEFITS

- Cures cancer

RISKS

- 1% chance of dying
- 10% chance of a leak from where the bowel was joined back together (may require further surgery)

AFTER SURGERY

SURGERY ALONE

- No further treatment required

CHEMORADIATION & SURGERY

- 4 chemotherapy treatments (1 treatment/month for 4 months)

Each treatment involves:

- Chemotherapy given through a special IV once a day for 5 days then 3 weeks off
- Need to come to the hospital on the first and last day of the treatment

RISKS OF CHEMOTHERAPY

20% - 40% chance of side effects:

- Sore gums and sores in the mouth
- Rash on hands and/or feet
- Fatigue
- Nausea
- Diarrhea

10% chance of:

- Low blood counts that may increase the risk of infection
- May require short hospitalization if side effects develop

LONG TERM OUTCOMES

SURGERY ALONE

- SURGERY ONLY

CHEMORADIATION & SURGERY

- CHEMORADIATION before surgery
- SURGERY
- CHEMOTHERAPY after surgery

LENGTH OF TREATMENT

- 3 – 4 months

- 8 - 9 months

BOWEL FUNCTION

- 2-3 bowel movements per day
- 5% chance of poor control over bowel movements
- 25% chance of wearing a pad
- 40% chance of effecting activities outside the home
- 10% chance of restricted social activity
- Will need to get to toilet within 10 minutes

- 3- 4 bowel movements per day
- 15% of poor control over bowel movements
- 50% chance of wearing a pad
- 50% chance of effecting activities outside the home
- 30% chance of restricted social activities
- Will need to get to toilet within 5 minutes

SEXUAL FUNCTION

- 30% chance of change in sexual function
- decreased libido
 - concerns about body image
 - vaginal dryness
 - vaginal pain during intercourse

- 60% chance of change in sexual function
- decreased libido
 - concerns about body image
 - vaginal dryness
 - vaginal pain during intercourse

OVERALL QUALITY OF LIFE

- One year after treatment, quality of life is close to those who have not had treatment for rectal cancer

CHANGE OF CURE

- 75% of patients are alive 5 years after surgery

Threshold Technique

Pre-op chemorads + surgery relative to surgery

TREATMENT PLAN "W"
(Surgery)

TREATMENT PLAN "L"
(Pre-op chemorads + Surgery)

SLIDING SCALE

15% risk of local recurrence 2 years after surgery

SLIDING SCALE

15% risk of local recurrence 2 years after surgery

- Risk of local recurrence set at 15% for both options
- Realistic risk of local recurrence for Surgery Alone
- Hypothetical risk of local recurrence for Pre-op chemorads + surgery

Patients preferences for pre-operative chemoradiation

	Local recurrence required to accept pre-op chemorads									
	15	10-14	9	8	7	6	5	4	1-3	0
n	8	8	3	4	0	0	19	3	1	4
%	16	16	6	8	0	0	38	6	2	8

- 16% would accept pre-op chemorads even if the risk of local recurrence was the same as surgery alone
- 8% would not accept pre-op chemorads even if offered a risk of local recurrence of 0%
- 54% would not accept pre-op chemorads until it offered a risk of local recurrence of 5% or less

Patient and physician preferences for surgical and adjuvant treatment options for rectal cancer

Harrison et al. Arch Surg 2008

- Cross sectional survey
- 75 patients during the post-operative stay
- 87 colorectal surgeons
- 80 medical oncologists
- 97 radiation oncologists
- Willingness to trade (WWT)
- Prospective measure of preference time trade off (PMPT)
- Anterior resection
 - Pre op radiation, post-op radiation, chemoradiation

Patient and physician preferences for surgical and adjuvant treatment options for rectal cancer

Harrison et al. Arch Surg 2008

- Willingness to trade (WWT)
 - Willingness to trade ANY life expectancy to avoid specified treatment
- Prospective measure of preference time trade off (PMPT)
 - Proportion of remaining life expectancy traded

Patient and physician preferences for surgical and adjuvant treatment options for rectal cancer

Harrison et al, Arch Surg 2008

	Avoid AR + post op radiotherapy		Avoid AR + pre op radiotherapy		Avoid AR + chemorads	
	WTT	PMPt	WTT	PMPt	WTT	PMPt
Patients	0.52	0.20	0.43	0.17	0.52	0.24
Colorectal surgeons	0.91	0.25	0.79	0.12	0.79	0.14
Medical Oncologists	0.74	0.08	0.71	0.06	0.72	0.07
Radiation Oncologists	0.60	0.05	0.53	0.05	0.64	0.08

Permanent colostomy versus local resection?

Colostomy vs local resection?	% accepting any risk	Average % mortality risk accepted
Patients, n=97	52%*	17.2%*
Colorectal Surgeons, n=43	88%	12.8%
Medical oncologists, n=103	90%	14%

Solomon et al. What do patients want? Dis Colon Rectum 2003;46:1351-1357

Patient preferences for adjuvant treatment for rectal cancer

- Both patients and physicians are willing to trade off effectiveness for improved functional results
- Physicians are more likely to trade off effectiveness than patients
- Not consistent with what physicians recommend in clinical practice

Should we reconcile this?

?

How do we reconcile this?

- ? Focus less on survival as a measure of our success
- ? Consider competing treatments as **OPTIONS**
- ? Present options to patients in a structured, non biased way
- ? Support patient's treatment decision even if it does not align with your own

Summary

- Shared decision making
 - Process of actively involving patients in treatment decision making
 - Leads to improved clinical outcomes
- With respect to rectal cancer:
 - Patients and physicians are willing to trade off effectiveness for improvements in functional results
 - Physicians are more likely to trade off effectiveness for themselves
 - Not entirely consistent with clinical practice
 - Strategies to reconcile differences between patients' and physicians' preferred treatment are needed in order to guide practice and achieve patient-centred care

THANK YOU

Eddy Classification

	STANDARD	GUIDELINE	OPTION
LIKELIHOOD OF OUTCOMES	Known	Known	Known/Unknown
AGREEMENT IN PATIENTS' PREFERENCES FOR OUTCOMES	Known, unanimous (95% agreement)	Known, majority (> 60% agreement)	Known and evenly split OR Unknown
PRACTITIONER INTERVENTION NEEDED	Counselling	Brief discussion of available options and elicitation of patient preference	Detailed discussion of options and elicitation of patient preference

Eddy DM. Clinical decision making: from theory to practice. Designing a practice policy. Standards, guidelines, and options. JAMA 1990;263:3077-3084